




# SF31G THRU SF36G

3.0 AMPS. GLASS PASSIVATED SUPER FAST RECTIFIERS



**FEATURES**

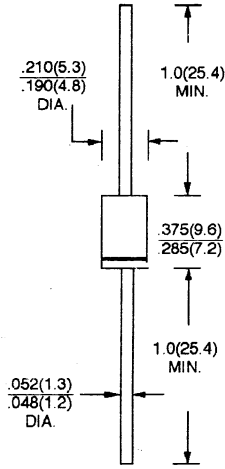
- \* Low forward voltage drop
- \* High current capability
- \* High reliability
- \* High surge current capability

**MECHANICAL DATA**

- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: Axial leads, solderable per MIL-STD-202, method 208 guaranteed
- \* Polarity: Color band denotes cathode end
- \* Mounting Position: Any
- \* Weight: 1.18 grams

**VOLTAGE RANGE**  
50 to 1000 Volts  
**CURRENT**  
3.0 Amperes

**DO-201AD**



Dimensions in inches and (millimeters)

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**  
Rating at 25°C ambient temperature unless otherwise specified.  
Single phase, half wave, 60 Hz, resistive or inductive load.  
For capacitive load, derate current by 20%

TYPE NUMBER	SYMBOLS	SF31G	SF32G	SF33G	SF34G	SF35G	SF36G	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	150	200	300	400	V
Maximum RMS Voltage	$V_{RMS}$	35	70	105	140	210	280	V
Maximum D. C Blocking Voltage	$V_{DC}$	50	100	150	200	300	400	V
Maximum Average Forward Current .375"(9.5mm) lead length @ $T_A = 55^\circ\text{C}$ (Note 1)	$I_{F(AV)}$	3.0						A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	100						A
Maximum Instantaneous Forward Voltage at 3.0A (Note 1)	$V_F$	0.95			1.25			V
Maximum D. C Reverse Current @ $T_A = 25^\circ\text{C}$ at Rated D. C Blocking Voltage @ $T_A = 125^\circ\text{C}$	$I_R$	5.0 50						$\mu\text{A}$ $\mu\text{A}$
Maximum Reverse Recovery Time (Note 2)	$T_{RR}$	35						nS
Typical Junction Capacitance (Note 3)	$C_J$	100			50			pF
Operating and Storage Temperature Range	$T_J, T_{STG}$	-65 to +150						°C

**NOTES:** 1. Each Lead mounted on a 0.8×0.8×0.04"(20×20×1mm) copper heat – sink.  
2. Reverse Recovery Test Conditions:  $I_F = 0.5\text{A}$ ,  $I_R = 1.0\text{A}$ ,  $I_{RR} = 0.25\text{A}$ .  
3. Measured at 1 MHz and applied reverse voltage of 4.0V D. C.

## RATINGS AND CHARACTERISTIC CURVES (SF31G THRU SF36G)

FIG. 1 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS

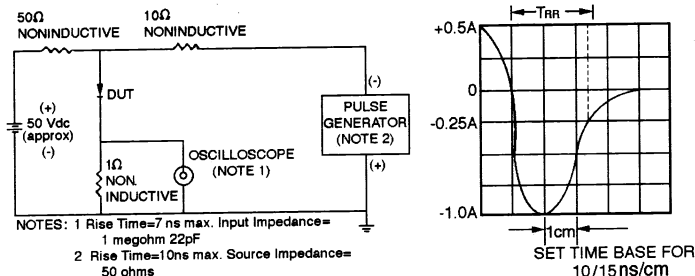


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

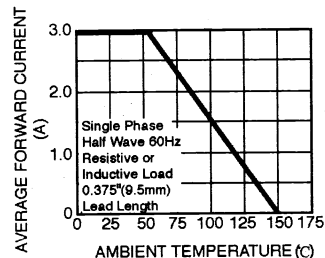


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

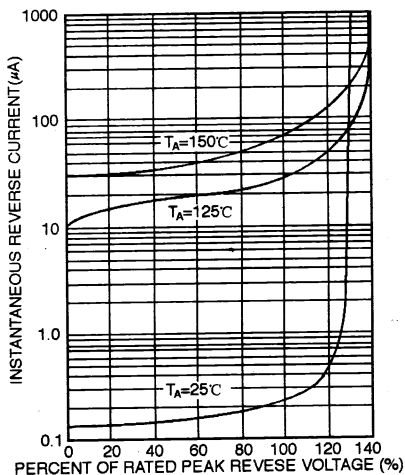


FIG. 4 - TYPICAL FORWARD CHARACTERISTICS

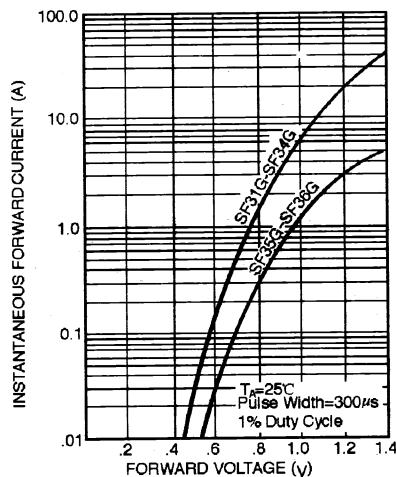


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

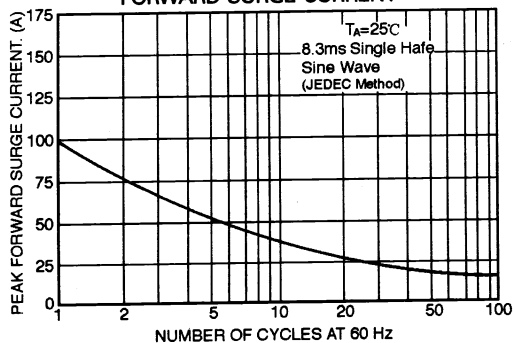


FIG. 6 - TYPICAL JUNCTION CAPACITANCE

